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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/504,330	02/14/2000	Paul H. Leamon	4889:70	7759

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EXAMINER

NGUYEN, CUONG H

ART UNIT	PAPER NUMBER
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3625

DATE MAILED: 08/30/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action SummaryApplication No.
09/504,330Applicant(s)
LeamonExaminer
Cuong H. NguyenArt Unit
3625*He*

— The MAILING DATE of this communication appears on the cover sheet with the correspondence address —

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Apr 18, 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- *See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892) 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 19) ☐ Notice of Informal Patent Application (PTO-152)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 20) ☐ Other:

DETAILED ACTION

1. This Office Action is the answer to the response received on 4/18/2001, which paper has been placed of record in the file.
2. Claims 1-32 are pending in this application.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1, 6-7 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships between 2 part of same limitation: "creating an allocation" vs. "define how contacts are distributed from a given business unit to multiple contact types". The examiner submits that there is no meaningful link between a step of creating a set of allocation and "that define how contacts are distributed from a given business unit to multiple contact type". Similar rationale is repeated for "creating a set of given requirement allocations that define how agent requirements are distributed from a contact type to one or more management units". Furthermore, "how agent requirement" lack of an antecedent basis.

5. Re. To claim 6: The method of claim 1 wherein the given contact allocations are minimum and maximum. The examiner submits that this is unclear about which contact allocation is assigned minimum and which contact allocation is assigned maximum (according to claimed language).

6. Re. To claim 7: The method of claim 6 wherein the given agent requirement allocations are minimum and maximum. The examiner submits that this is unclear about which agent requirement allocation is assigned minimum and which agent requirement allocation is assigned maximum (according to claimed language).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-5, 8-21 are rejected under 35 U.S.C. § 102(b) as being anticipate by Maggie Klenke (title: "ACDs get skills-based routing" - in business communications review 7/1995).

A. Re. To claim 1: **Klenke** teaches a method of allocating and scheduling in a skill-based contact center environment organized into a hierarchy of a business unit at a 1st

level, a contact types at a 2nd level, and a management unit at a 3rd level (see **Klenke** pg.43, 1:47 to 2:3), comprising:

- creating a set of given contact allocations that define how contacts are distributed from a given business unit to multiple contact types (see **Klenke** pg.48, 1:39-41, pg.48, 1:43 to 2:3, and pg.49, 1:14-32);

- creating a set of given requirement allocations that define how agent requirements are distributed from a contact type to a management unit; (see **Klenke**, Table 1); and

- allocating forecasted contacts and forecasted agent requirements based on the given contact and requirement allocations (see **Klenke**, Table 2).

B. Re. To claim 2 (as claims 19, 21): The method of claim 1 wherein the given contact allocations are minimum contact location (see **Klenke**, pg.48, 42-43; and pg.51, 1:1-3).

C. Re. To claim 3: The method as described in claim 2 wherein the given requirement allocations are minimum agent requirement allocations (see **Klenke**, pg.48 1:42-48 pg.50, 2:29-32, and pg.51 1:1-3).

D. Re. To claim 4: The method of claim 1 wherein the given contact allocations are maximum contact allocation (see **Klenke**, pg.50, 1:41-43, 2:4-8,15-19).

E. Re. To claim 5 (as claims 19/21): the method as described in claim 4 wherein the given requirement allocations are maximum agent requirement allocations (see **Klenke**, pg.48, 2:36-39, pg.50, 2:15-19).

F. Re. To claim 8: The method of claim 1 wherein the allocating step allocates forecasted contacts and forecasted requirements (see **Klenke**, pg.51, 1:20-23).

G. Re. To claim 9: The method of claim 8 further including the step of predicting the agent availability data (see **Klenke**, pg.51, 1:20-23).

H. Re. To claim 10: The method of claim 9 wherein the agent availability data is predicted by a schedule simulation (see **Klenke**, pg.51, 1:49-56); this is also obvious with e-calendar.

I. Re. To claim 11: The method of claim 8 wherein the agent availability data is characterized by contact type (see **Klenke**, pg.51, 2:37-39).

J. Re. To claim 12: The method of claim 1 further including the step of **generating agent schedules** for the management units (see **Klenke**, pg.51, 1:49-56); this feature is also obvious with e-calendar.

K. Re. To claim 13: The method of claim 1 wherein a management unit is a collection of agents located at a given contact center location (this feature is inherently disclosed in **Klenke's** article).

L. Re. To claim 14 (as claim 27): The method of claim 13 wherein at least some agents in a management unit are multi-skilled (see **Klenke**, pg.49, 1:26-30).

M. Re. To claim 15: The method of claim 1 wherein the contact center environment is a contact center environment

is a telephone call center. **Klenke's** article teaches about this subject matter.

N. Re. To claim 16: The method as described in claim 1 wherein the contact center environment is a contact center that handles a contact selected from the group consisting of: telephone calls, voice mails. This feature is inherently disclosed in **Klenke's** article.

O. Re. To claim 17: The examiner submits that this claim's limitations are similar as limitations of claim 1; therefore, same rationales and reference are applied.

About a limitation of:

- allocating a percentage of incoming calls from a given business unit to one call type; and
- allocating agent requirement for a given call type to one management unit.

P. Re. To claim 18: The examiner submits that this claim's limitations are similar as limitations of claim 10; therefore, same rationales and reference are applied.

Q. Re. To claim 19: The examiner submits that this claim's limitations are similar as limitations of claims 2 & 3; therefore, same rationales and reference are applied.

R. Re. To claim 20: The method of claim 17, wherein said given call allocations and the given requirement allocations are maximum values (see **Klenke**, pg.50, 2:15-19).

S. Re. To claim 21: The method of claim 17, wherein the given call allocations and the given requirement allocations are minimum and maximum values (see **Klenke**, pg.50, 2:15-19).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 22-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Maggie Klenke**, in view of the Official Notice.

A. Re. To claim 22 (similar as claim 17): An allocation method operative in a skill-based call center environment; comprising:

- organizing the call center environment into a hierarchy of one business unit at a first level, one call types at a second level, and a set of one management unit at a third level; and
- allocating a percentage of incoming calls from a given business unit to one call type (see **Klenke**, pg.48, 1:39-41, 1:43 to 2:3; and 2:20-25); and
- allocating agent requirements for a given call type to one management unit (see **Klenke**, pg.48, 2:4-12).

B. Re. To claim 23 (similar as claim 27): The method as described in claim 22 wherein a given management unit is a collection of multi-skilled agents (see **Klenke**, pg.49, 1:26-30).

C. Re. To claim 24 (similar as claim 28): The method as described in claim 22 wherein a given call type is associated with a given automatic call distributor (ADC). This feature is obviously disclosed in **Klenke's** article.

D. Re. To claim 25 (similar as limitation of claim 29): The method as described in claim 22 wherein the step of allocating agent requirements further include predicting agent availability data using a schedule simulation (see **Klenke**, pg.48, 2:36-39, and pg.51, 1:49-56); this is also obvious with e-calendar.

E. Re. To claim 26 (similar as claim 30 's limitations): An allocation method operative in a skills-based contact center environment comprising:

- organizing the contact center environment into a hierarchy of **zero business unit** at a first level, one contact type at a second level, and a set of one management units at a third level (see **Klenke**, pg.49, 2:32-38); and
- allocating agent requirements for a given contact type to one management unit (see **Klenke**, pg.48, 1:39-41; and pg.49 , Table 1).

Klenke fails to disclose about allocating a percentage of contacts from a given business unit to one contact type.

However, the Official Notice is taken here that assigning a percentage of telephone call in ACD center to one contact type was done in the past; e.g., in

order to change from an old service to a new technology, the transition must be smooth, continuous and assigning a percentage of call to one contact type had been done to solve that problem.

It is obvious to one with skill in the art that this problem was raised and solutions were suggested in Klenke's article: "The goal of automated call distributor (ACD) technology has always been to spread incoming calls among call center agents so that each agent handled an equitable share of the load and the caller had the best chance of being served quickly. Now, a new kind of thinking - skills-based routing - has entered the call center arena. It takes ACDs one step further and ensures that an incoming call is routed to the available agent whose skills are best matched to the caller's needs".

F. Re. To claim 27 (similar as claim 31 's limitation): The method as described in claim 26 wherein a given management unit is a collection of agents at least some of which are multi-skilled (see **Klenke**, pg.49, 1:26-30 and pg.50, 1:38-40).

G. Re. To claim 28 (similar as claim 24 's limitation): The method as described in claim 26 wherein a given contact type is associated with a given automatic work distributor. This feature is obviously disclosed in **Klenke's** article (see **Klenke**, pg.49, 1: 6-10).

H. Re. To claim 29 (similar as a limitation of claims 25, 10, 32): The method as described in claim 26 wherein the step of allocating agent requirements further include predicting agent availability data using a schedule simulation (see **Klenke**, pg.51, 1:49-56); This is also obvious with e-calendar.

I. Re. To claim 31: The method as described in claim 30 wherein a management unit is a collection of multi-skilled agents. The examiner submits that this limitation is similar as in claim 27; therefore, same rationales and reference are applied.

The examiner submits that all claimed limitations are well-known in the art relating to ACD, one reason is because these claimed limitations are very broad that they are easily recognized by artisan in the art to be ability/features of an ACD system and said components would perform claimed tasks/steps; cited prior art's limitations are not necessary spelled-out exactly claimed languages, because cited prior art is also directed to a similar process/system for ACD communication. It is reasonable that various modifications and variations of the described method or system of the cited prior art would be apparent to those skilled in the art without departing from the scope and spirit of the reference.

Conclusion

9. Claims 1-32 are unpatentable.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cuong H. Nguyen whose telephone number is 703-305-4553. The examiner can normally be reached on Mon.-Fri. from 7:15 AM to 3:15 PM (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ms. Wynn Coggins, can be reached on (703) 308-1344.

Any response to this action should be mailed to:

Amendments

***Commissioner of Patents and Trademarks
Washington D.C. 20231***

or faxed to:

(703) 305-7687 [Official communications; including
After Final communications labeled
"Box AF"]

703-746-5572 (RightFax) Informal/Draft communications,
labeled
"PROPOSED" or "DRAFT"]

Hand delivered responses should be brought to Crystal Park 5, 2451 Crystal Drive, Arlington, VA, 7th floor receptionist.

Any inquiry of a general nature or relating to the status of this application or proceeding should be

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directed to the Receptionist whose telephone number is
(703)308-1113.

Cuong Nguyen

August 15, 2002